BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

SURGERY OF THE INFANT ABDOMEN

JOHN HOMER WOOLSEY, SAN FRANCISCO.—Surgery of infants today has a decreased mortality over that of ten years ago due chiefly to the wiser attention paid to the patient's general care. Judicious attention to the patient as regards fluid intake and output; light and short anesthesia; limited and definite surgical procedures; and gentleness in handling and protection to the tissues, permits surgery that previously one would not consider. For these reasons one can today recommend surgical repair for inguinal hernia in infants where heretofore a most conservative opinion ruled.

INGUINAL HERNIA

Inguinal hernia in infants has been estimated to occur in variable degrees, but five to seven per cent seems the average. Of these approximately five-tenths per cent develop some complication in infancy or childhood. Coley reported that out of fifteen thousand cases of adult inguinal hernias one-third existed in childhood. In addition, it is a rather general opinion that the majority of oblique inguinal hernias are due to a congenital weakness. If accurate statistics were kept, I believe it would be shown that the majority of inguinal hernias that are present in early infancy, but disappear with, or without, treatment, recur later in adult life.

In the treatment the use of pressure bandages such as adhesive, the yarn truss, or the mechanical truss, have yielded actually and solely but few, if any, complete obliterations of the patent funicular process. Personally, I have never witnessed any direct value from their use. The keeping of the child in a healthy state of tissue growth and a contented humor does more, for it allows a continuous approximation of the walls of the funicular process. This approximation is necessary if the apposing surfaces of the hernial sac are to heal or unite. Inguinal hernias in infancy at times have been observed, for some reason not accurately explained, to disappear and to remain so. It is possible for this phenomenon to occur during the first three months, and it may happen at even a greater age. However, it is doubtful if it occurs after six months, and so a period of six months is arbitrarily set before surgical correction is recommended.

Surgical correction of inguinal hernia in infants consists primarily in a high ligation and obliteration of the sac. The closure of the internal oblique and conjoined tendon to the inguinal ligament is advisable but not compulsory, for the defect is not in the muscle wall. It is in the failure of the funicular process of the peritoneum to close. Transplantation of the cord is unnecessary and unwise at this early age.

Strangulated, incarcerated, and recurring inguinal hernias with intra-abdominal strain are already recognized as needing surgical repair. The other inguinal hernias of the infant that exist after the age of six months should be repaired surgically early in life—preferably by the age of eighteen months.

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APPENDICITIS IN INFANCY

CHARLES M. FOX, SAN DIEGO.—The last few years have seen a marked improvement in the results of the treatment of appendicitis in infancy, due to earlier diagnosis. Until recently the subject has usually been dismissed with a statement something like the following:

"Appendicitis in infancy is not very common and the diagnosis is difficult. Most cases are not operated upon until the appendix has ruptured, and in many instances the diagnosis is made at autopsy."

This is still true in fact, but thanks largely to the pediatricians we now not infrequently see these patients early, that is, before rupture. The trained infant specialist, accustomed to seeing all sorts of acute illnesses, will much more quickly recognize the unusual condition at a glance. If one waits for the classic picture, most cases will be overlooked.

Perforation occurs in a greater percentage of cases than in adults, though this percentage is being materially lessened by earlier diagnoses. Once perforation occurs, the mortality becomes definitely higher than in adults under the same circumstances.

Reviewing briefly the symptoms, the first we have to consider is pain. The location of the pain is variable. I have several times had a child of two years of age refer the pain to the back. In an infant, of course, all we know is that there is a pain somewhere. Pain does not seem to be so constant as in adults. I have occasionally seen a free interval of an hour or two at a time with an acutely inflamed appendix.

Nausea and vomiting, so common to almost any upset in an infant, are suggestive when it is observed that vomiting has no apparent effect on the pain or apparent distress.

The temperature is usually elevated, but does not often go above 101 or 102.

The pulse varies. In general a very rapid pulse indicates a high grade of toxemia.

Tenderness and rigidity are by long odds the most important finding. It is, however, at times

very difficult to determine their presence, and physicians who care for and understand infants and young children can frequently elicit this sign much more rapidly than others, due to the cooperation of the patient. If the appendix is retrocecal, deep palpation may be necessary before pain is caused. The presence of tenderness and rigidity in a suspicious case is enough to justify operation.

Rectal examination in an infant is of value if there is an abscess, but as an indication of early tenderness it is not often useful since the discomfort of the examination itself is considerable.

The blood count usually varies from 7000 to 15,000 plus, and the polynuclear cells from 70 to 90 per cent. A white count of 15,000 practically always means pus.

An acute attack is sometimes followed by the passage of considerable mucus for a few days, making one believe that he has been dealing with a colitis, which condition, however, rarely occurs in infants, except with dysentery. In one such case I made this diagnosis twice, and refused to operate, against the judgment of the pediatrician who was caring for the child, only to remove a ruptured appendix during the third attack. The treatment is practically the same as in adults—immediate operation before rupture, operation after abscess formation being done according to the condition of the individual case. Occasionally after operating on a fairly typical case with relatively mild but definite symptoms, an appendix but little inflamed will be found, associated with many enlarged mesenteric glands, the symptoms in this instance, of course, being due to the glands. Incidentally, these patients run a temperature for several days after operation.

I have said nothing about differential diagnosis, which must be made from acute illnesses with abdominal pain and distention. I was once asked to operate on a child of eighteen months, and found a typical scarlet fever rash present.

Acute respiratory infection must be ruled out as well as acute pyelitis. I believe that in these cases of suspected appendicitis the surgeon should at times take the judgment of the pediatrician rather than trust to his own. My experience has justified this procedure more than once.

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PYLORIC STENOSIS IN INFANTS

GUY COCHRAN, LOS ANGELES.—Nothing in the surgery of children can be more depressing than the three weeks old baby who weighed eight or nine pounds at birth and now weighs five pounds (those who have lost 20 per cent or over of body weight are bad risks)—the cry of starvation is like nothing else; the loose folds of skin on his body (for three to one are males) are pathetic as of a wrinkled, old man; the projectile vomiting is tragic in its exhaustion.

Before operation the baby has been given fluids; on the table his body is surrounded by cotton packs; a general anesthetic is used. Through an upper right rectus incision three centimeters in length the tumor is located and with a rubber-covered hook it is brought outside the abdomen; an artery clamp is placed on the abdominal wall underneath the tumor mass to hold it in position. A longitudinal incision is made the length of the tumor. This is deepened by spreading with a small artery clamp, and this blunt dissection is carried on until the mucosa appears below. Every fiber must be broken, for we have had one recurrence of symptoms and on secondary operation found three small threads of fiber which had been left. This blunt dissection must be done with most extreme care, for at the gastric end there is much thickening from edema while at the duodenal end the tumor thins out rapidly and bleeds easily. If bleeding occurs, it is not possible to clamp the bleeder without tearing a hole into the duodenum with leakage and subsequent peritonitis, so we have closed our tumor incision to stop bleeding by pressure and started all over again. Sufficient width of tumor tissue must be removed to allow the mucosa to bulge into the entire length of the incision.

Before closing, the abdomen is filled with salt solution; the wound is sutured as in adults, using two deep stay sutures, for the rectus muscle is small and any postoperative vomiting is a severe strain upon it.

The baby usually vomits once during the afternoon following, but probably never again. Convalescence is rapid. Through the entire care of these cases the fullest coöperation is required between pediatrician and surgeon.

Nothing in the surgery of children is more satisfying than to have a mother bring a sturdy four or five-year-old boy into the office to proudly show off what was once her pyloric stenosis baby.

United States Division of Mental Hygiene, Formerly Called Narcotics Division.—In a recent report Surgeon-General H. S. Cumming of the Public Health Service indicates that the year ended June 30, 1930, has been characterized by additional legislation seeking to coördinate and crystallize the functions of the Narcotics Division, now designated by law as Division of Mental Hygiene.

At the close of the year, the functions of the Division of Mental Hygiene, in the office of the Surgeon-General, included the administration of the two recently authorized United States narcotic farms; studies and investigations of the nature of drug addiction and the best method of treatment and rehabilitation of persons addicted to the use of habit-forming drugs; the dissemination of information on methods of treatment and research in this particular field; coöperation with state and local jurisdictions with a view to their providing facilities for the care and treatment of narcotic addicts; the supervising and furnishing of medical and psychiatric service in federal penal and correctional institutions; studies and investigations of the abusive use of narcotic drugs and the quantities of such drugs necessary to supply the normal and emergency medicinal and scientific requirements of the United States; and, lastly, studies and investigations of the causes, prevalence, and means for the prevention and treatment of mental and nervous diseases.

The site for the first United States Narcotic Farm has been selected at Lexington, Kentucky, and plans are under way for the development of the necessary buildings thereon. Medical officers have been assigned to the medical and psychiatric clinics established at the several penal and correctional institutions.—*United States Public Health Service.*